

INCREMENT WITH AGE OF PROXIMAL ADVANCED NEOPLASIA IN THREE ROUNDS OF A COLORECTAL CANCER SCREENING BY IMMUNOCHEMICAL FECAL OCCULT BLOOD TESTING

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Background and Aims

There is a growing interest about the anatomical site of screen-detected colorectal cancer (CRC). Some recent data suggested that both colonoscopy and fecal immunochemical test (FIT) might be less sensitive for cancer located in the right side of colon. Moreover right-sided CRCs seem to be diagnosed more frequently in older compared to younger age. We analysed a screened population looking for age-related differences in the colonic location of advanced neoplasia (AN) (carcinomas and advanced adenomas).

Methods

In Aosta Valley Region (Italy) between 2006 and 2010, about 38,000 average-risk subjects, 50–74 years old, were invited for 3 rounds of a biennial screening program for CRC, based on 1-day FIT (OC Sensor, cut-off set at 100 ng Hb/ml buffer). We estimated the cumulative detection rate (DR) of AN over 3 rounds among people who attended the initial screening invitation, stratified by two age group (50-54 years vs 65-69 years) and by two colonic site (right vs left colon) at colonoscopy in FIT positive subjects. Adenomas with at least one of the following features – size > 9 mm; villous component >20%; high-grade dysplasia – were classified as advanced.

Results

About 75% out of 12,944 subjects attending the initial screening performed 2 consecutive tests and 50% had 3 consecutive FITs (average: 2.2 tests per person). In the 8,708 subjects in the younger cohort 464 (5.3%) had at least 1 positive FIT compared to 535 (12.6%) of the 4,236 subjects in the older cohort. Table I reports the results of the cumulative DR and the site distribution of CRCs and advanced adenomas in the two age groups.

The relative risk in the cumulative DR for older cohort, compared to younger subjects, was 5.02 (95% CI: 3.15-8.00) for right-sided and 2.20 (CI: 1.68-2.87) for left-sided AN.

Tab I: Cumulative Detection Rate of AN over 3 FIT screening rounds by colonic site and screenees age

50-54 years	CRC	Advanced Adenoma	Total
Distal N %	9 0,10	93 1,07	102 1,17
Proximal N %	3 0,03	22 0,25	25 0,29
TOTAL N %	12 0,14	115 1,32	127 1,46
65-69 years	CRC	Advanced Adenoma	Total
Distal N %	10 0,24	99 2,34	109 2,57
Proximal N %	15 0,35	46 1,09	61 1,44
TOTAL N %	25 0,59	145 3,42	170 4,01

Conclusions

Over 3 CRC screening rounds with FIT subjects aged 65 to 69 showed a near 3 fold increased cumulative DR of AN compared to subjects aged 50 to 54. The increase was about twice as high for proximal than for distal AN.

These findings confirm a shift from left toward right side of colon of advanced neoplasia with age in our screening population.